

App. No. 09/446,550
Atty. Docket No. CM-1519Q
Amtd Dated December 3, 2003
Reply to Office Action of September 12, 2003
Customer No. 27752

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Remarks/Arguments

Claim Status

The Office Action Summary in the present Office Action (Paper No. 17) continues to indicate that Claims 1-28 are pending, with Claims 15-28 being withdrawn from consideration. The Applicants respectfully direct the Examiner to the question with respect to Claims 21-28 in Paper No. 16 and continue to seek clarification regarding the basis for the indication that there are 28 claims pending in the present application.

Claim Amendments

Claim 1 has been amended to further describe that at least a portion of the crack formation is provided by an activation process whereby the laminate passes through at least one roll pair where there are engaging ridges and grooves on the roll pair. Support for the amendment can be found at page 11, line 18 to page 14, line 6.

Rejections Under 35 USC § 103(a)

Claims 1-14 stand rejected under 35 USC § 103(a) as being unpatentable over Dobrin (US 5,628,737) in view of Tapp (US 5,169,712). The Office Action admits that the Dobrin patent fails to disclose the use of a particulate filler material embedded in a polymeric film layer and asserts that the patent discloses all other aspects of the invention. Specifically, the Office action states that:

- The Dobrin patent discloses an absorbent article 20 (Figure 2) comprising a core region 74 and a chassis region 76 surrounding the core region.
- The article 20 is said to also comprise a laminate 95 which extends into both the core region and the chassis region to form a core backsheet and a chassis backsheet. The laminate 95 is said to comprise a polymeric film layer 26 (col. 6, lines 42-43) and a fibrous layer 90 (col. 9, lines 51-52). The laminate 95 is said to also comprise apertures 84 in the chassis region 76. The Office Action asserts that the apertures 84 give the chassis region 76 a higher degree of breathability than the core region 74.

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hence the MVTR in the core region 74 is asserted to be lower than the MVTR in the chassis region 76.

The Office Action goes on to state that the Tapp reference discloses a breathable laminate comprising a polymeric film layer and a fibrous layer (col. 4, lines 39-42, 60 and 61). The polymeric film layer is said to: 1) have a basis weight greater than 25 gsm (col. 16, lines 29-32), 2) comprise a polymeric matrix and a particulate film material (col. 6, lines 65-68) and 3) enhance breathability by the formation of cracks around the particulate filler material (col. 13, lines 15-18). The Office Action goes on to conclude that it would have been obvious to construct the laminate of Dobrin using the polymeric film layer of Tapp to increase breathability of the laminate.

Regarding individual claims, the Office Action asserts:

- **Claim 2:** Dobrin discloses that the polymeric film layer 26 is wider than the fibrous layer 90 (col. 10, lines 7-9).
- **Claims 3 and 4:** Tapp discloses a MVTR of at least 500 g/24hr/m² (col. 5, lines 42 and 43).
- **Claims 5 and 6:** While admitting that the Dobrin patent fails to disclose how much greater that transmission rate of the chassis region is than the transmission rate of the core region, the Office Action asserts that the chassis region has a higher transmission rate because the chassis region is apertured.
- **Claim 7:** Tapp discloses the use of Calcium Carbonate as a filler at col. 6, lines 67 and 68.
- **Claim 8:** Tapp discloses that the polymeric layer has a basis weight that is less than 50 gsm at col. 16, lines 29-32.
- **Claim 9:** Tapp discloses that the fibrous layer has a basis weight of about 10 gsm at col. 17, lines 41-43 which, when combined with the disclosure of the basis weight of the polymeric layer yields a laminate basis weight of less than 70 gsm.
- **Claim 10:** Dobrin discloses a nonwoven fibrous layer at col. 9, line 52.

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- **Claims 11 and 13:** Tapp discloses combining a polymeric layer and a fibrous layer by thermobonding and adhesive bonding at col. 23, lines 60-64.
- **Claim 12** Tapp discloses combining the polymeric layer and the fibrous layer by extrusion at col. 20, lines 21-23.
- **Claim 14:** Dobrin discloses a baby diaper (Figure 1).

In response to the Applicants' arguments in Paper No. 16 the Office Action states that each of the core backsheet and chassis backsheet is breathable because:

- Dobrin discloses a laminate comprising a polymeric layer comprising a vapor or gas permeable film (col. 6, lines 35-42).
- The laminate also comprises a fibrous layer which is breathable (col. 9, lines 51-58).

Since the laminate, which comprises both the core backsheet material and the chassis backsheet material, is said to be breathable because both portions thereof are breathable, each of the core backsheet material and the chassis backsheet material are breathable. The Office Action goes on to assert that modifying backsheet material of Dobrin, in view of Morman to provide particulate filler material would not destroy the breathability of Dobrin's backsheet material.

Regarding individual claims:

Claims 3 and 4: The Office Action states that teaches Dobrin (col. 7, line 50-col. 8, line 18) that the apertured zone 80 permits the passage of vapors and/or liquids and goes on to assert that Dobrin does not teach that the non apertured zone 82 does not permit the passage of vapors (col. 6, lines 35-42).

Claims 5 and 6: The core region is breathable as discussed above.

The arguments with respect to Claims 3, 4, 7 and 12 are said to be moot in view of the new grounds of rejection.

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The Applicants respectfully direct the Examiner to the amendment to Claim 1. The Applicants submit that an article combining the teachings of the Dobrin, *et al.* patent and the Tapp reference fails to establish a *prima facie* case of obviousness because *the combination fails to teach or suggest all of the limitations of Claim 1 as amended (MPEP § 2143.03)*. Specifically, the combination fails to teach or suggest a breathability provided by cracks in a polymeric layer of a laminate where the cracks were at least partially formed by passing the laminate through a roll pair where the roll pair comprises engaging ridges and grooves. Since, as admitted in the Office Action, Dobrin fails to teach or disclose a polymeric film layer with an embedded particulate, the combination must rely on Tapp for such structure. Therefore, in an article combining the teachings of Dobrin, *et al.* and Tapp, Tapp's oriented film is stretched prior to lamination with the support layer. See Tapp at col. 15, line 25–col. 16, line 57 which states, in part at col. 16, lines 43 and 44:

A support layer is adhered to the microporous film layer to provide additional support and reinforcement.

Net, there is no teaching in the combination of passing a laminate comprising both a film material with an inorganic filler (i.e., embedded particulate) and a fibrous layer through a process to cause cracks. Therefore, an article combining the teachings of Dobrin and Tapp fails to teach or disclose all of the limitations of Claim 1 as amended and the Office Action has failed to establish a *prima facie* case of obviousness with respect to Claim 1 as amended. Given that the Applicants have shown that Claim 1 as amended is not obvious over the combination of Dobrin *et al.* and Tapp, and given further that Claims 2–14 depend from Claim 1 and have all the limitations of the base claim, the Applicants respectfully request that the Examiner reconsider the rejection of Claims 1–14 under 35 USC § 103 (a) over the combination of Dobrin and Tapp, withdraw it and allow the claims.

With respect to the rejection of Claims 3 and 4, the Applicants submit that the MVTR values cited in the Tapp reference at col. 5, lines 42 and 43 bear only a passing

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relation to the claimed MVTR values. Specifically, the Applicants respectfully direct the Examiner to col. 28, lines 56-60 of the Tapp reference. As described therein, Tapp measures MVTR by weight gain of a desiccant in a cup that is closed by the material of interest when the closed cup is exposed to an environment of 37.8°C and 90% relative humidity. The Applicants further direct the Examiner to page 18, lines 5 and 6 of the present application. As described therein, MVTR is measured by exposure of a closed cup to an environment of 40°C and 75% relative humidity. The Applicants submit that this difference in environmental conditions means that Tapp's MVTR values only bear a passing relationship to the claimed values because:

- As is well known, relative humidity is a measure of the percentage of the saturated moisture level in an atmosphere at a specific temperature.
- As is also well known the properties of saturated steam are widely available (e.g., Handbook of Chemistry and Physics 44th Edition, CRC Publishing, Cleveland, p 2547). As described therein, one cubic meter of an atmosphere saturated with water vapor at 37.8°C would contain 45.73 grams of water vapor while a saturated atmosphere at 40°C would contain 51.1grams.
- Since Tapp's environment at 37.8°C is maintained 90% relative humidity, one cubic meter of Tapp's environment would contain 41.2 grams of water vapor while the environment of the present application (75% relative humidity) would contain 38.3 grams.
- It is also well known (Fick's Law) that mass transfer depends on the concentration gradient across a barrier.

To summarize, the Applicants submit that the differences in environment in the two MVTR test environments mean that, more than routine experimentation would be required to identify a polymeric layer suitable for use in an absorbent article. (The Applicants note that, on the whole, the Tapp reference is directed toward building materials which will have substantially different requirements than the claimed absorbent articles). Hence the Office Action fails to establish a *prima facie* case of obviousness.

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with respect to Claims 3 and 4 because the required level of experimentation would lead one of ordinary skill away from relying on Tapp. Therefore, the Applicants respectfully request that the rejection of Claims 3 and 4 over the combination of Dobrin, *et al* and Tapp be reconsidered and withdrawn even if Claim 1 continues to be rejected.

Further, with respect to Claim 4, there is nothing in the combination that would make the claimed difference in MVTR obvious. The mere presence of MVTR values in Tapp with an unbounded upper limit does not mean that a specific relationship between two differing values in differing regions of an absorbent article is obvious.

With respect to Claim 12, the Office Action asserts that Tapp, at col. 20, lines 21 to 23, discloses combining the polymeric layer and the fibrous layer by extrusion. The Applicants have copied, below, the entire paragraph referenced by the Office Action (col. 20, lines 21-34).

In a preferred embodiment, the self-bonded, fibrous, nonwoven webs (emphasis added) are prepared by extruding a molten polymer through multiple orifices located in a rotating die, contacting the extruded polymer while hot as it exits the orifices with a fluid stream to form substantially continuous filaments, drawing the filaments into fibers having deniers in the range of about 0.5 to about 20, and collecting the drawn fibers on a collection device whereby the filaments extruded through the die strike the collection device and self-bond to each other to form the nonwoven web. These self-bonded, fibrous, nonwoven webs (emphasis added) can be supplied directly from the process or the webs can be supplied from rolls onto which the webs have been wound.

The Applicants direct the Examiner to the emphasized phrase in the paragraph and note that the process described therein is a classic description of the spunbonding process for making a nonwoven material not for extrusion coating as is claimed. The Applicants further note the last sentence of the paragraph that clearly indicates that the nonwoven material is handled separately and, as noted above, is only combined with Tapp's

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microporous film layer after the film has been stretched. Yet, the Office Action fails to establish a *prima-facie* case of obviousness with respect to Claim 12 and the rejection of this claim should be reconsidered and withdrawn and Claim 12 should be allowed.

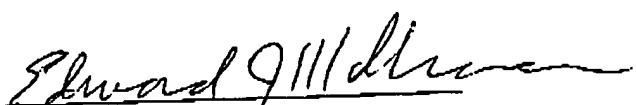
SUMMARY

All of the rejections in the Office Action have been discussed as have the distinctions between the cited references and the claimed invention. No new matter has been added by the Amendment. In light of the amendments to the claims and discussions contained herein, the Applicants respectfully request reconsideration of the rejections, their withdrawal, and allowance of all of the claims. Issuance of a Notice of Allowance at an early date is earnestly solicited.

Respectfully submitted,

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